

CRFI to be filed

BIOTECHNOLOGY  
SYSTEMS  
BRANCH

11/26

## RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/065,200  
Source: OIPE  
Date Processed by STIC: 9-26-02

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FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216:

PATENTIN 2.1 e-mail help: [patin21help@uspto.gov](mailto:patin21help@uspto.gov) or phone 703-306-4119 (R. Wax)

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TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER  
VERSION 3.1 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND  
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Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

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3. Hand Carry directly to:
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Revised 01/29/2002

Does Not Comply  
Corrected Diskette Needed  
See page 7



OIPE

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/065,200

DATE: 09/26/2002

TIME: 07:37:29

Input Set : N:\CrF3\Datahold\EFS\10065200\FC-4-1.txt  
Output Set: N:\CRF4\09262002\J065200.raw

3 <110> APPLICANT: Wisnewski, Nancy  
4 Becher, Anna M.  
5 Jarvis, Eric  
7 <120> TITLE OF INVENTION: NOVEL FLEA ECDYSONE AND ULTRASPIRACLE NUCLEIC ACID  
8 MOLECULES, PROTEINS AND USES THEREOF  
10 <130> FILE REFERENCE: FC-4-1  
C--> 12 <140> CURRENT APPLICATION NUMBER: US/10/065,200  
13 <141> CURRENT FILING DATE: 2002-09-25  
15 <150> PRIOR APPLICATION NUMBER: 09/435,019  
16 <151> PRIOR FILING DATE: 1999-11-05  
18 <150> PRIOR APPLICATION NUMBER: 60/107,559  
19 <151> PRIOR FILING DATE: 1998-11-06  
21 <160> NUMBER OF SEQ ID NOS: 71  
23 <170> SOFTWARE: PatentIn Ver. 2.0  
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26 <211> LENGTH: 446  
27 <212> TYPE: DNA  
28 <213> ORGANISM: Ctenocephalides felis  
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35 aaatctgctg ctcccttagc gaattctgca ttacttcaga agcctgatat ttgcctgcg 180  
37 gtcataatgcgaccatt acctccagaa gcaactaaag tggaaatttt gtcagacaag 240  
39 attcttgctg aaaacagaat tcgaaaatgtt ccaccttga ctgcaaatca agaatatgt 300  
41 atcgcaagat tagtgtggta ccaagatgga tatgaacaac cttctgagga agacactacga 360  
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49 <211> LENGTH: 446  
50 <212> TYPE: DNA  
51 <213> ORGANISM: Ctenocephalides felis  
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56 tcacctggtg tacttatcat tatttcgtt aggtttcctt cagaagggtt ttcataatcca 120  
58 tcttggtacc acactaatct tgcatcaca tattttgtat ttgcgttcaa aggttggaca 180  
60 tttcgaattc tggtttcagc aagaatcttg tctgacaaaa atttcactt agttgcttct 240  
62 ggaggtaatg ggtcgcatat catgaccgca ggcaaaatat caggcttctg aagtaatgca 300  
64 gaattcgcta agggagcgc agatttcca acgttacctg atattggtcc gatgtcctt 360  
66 tccttctgtg ctttcatttc ttgcgttca atggcgcatt gttttcggg aaccacgcac 420  
68 tcggggcgca ttccgacacgc caaaca 446  
71 <210> SEQ ID NO: 3  
72 <211> LENGTH: 350  
73 <212> TYPE: DNA

RAW SEQUENCE LISTING  
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Input Set : N:\Crf3\Datashold\EFS\10065200\FC-4-1.txt  
Output Set: N:\CRF4\09262002\J065200.raw

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81 cggcatgaa atgcgaccca ttacctccag aagcaactaa agtcaaattt ttgtcagaca 180  
83 agattcttgc tgaaaacaga attcgaaatg ttccaccttt gactgcaa at caagaatatg 240  
85 tgcgtcgaaag attagtgtgg taccaagatg gatataaca accttctgag gaagacctac 300  
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91 <211> LENGTH: 350  
92 <212> TYPE: DNA  
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100 atttgcgtc aaaggtggaa catttcgaat tctgtttca gcaagaatct tgctgacaa 180  
102 aaatttcaact ttagttgctt ctggaggtaa tgggtcgcat ttcatgaccg caggcaaaat 240  
104 atcaggcttc tgaaggaatg cagaattcgc taaggagca gcagatttc caacggtacc 300  
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111 <212> TYPE: DNA  
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115 <221> NAME/KEY: CDS  
116 <222> LOCATION: (605)..(2287)  
118 <400> SEQUENCE: 5  
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123 tctatcaatc agaaatgata attaaacaat tttttatata taaaatagaa catattatgt 180  
125 tcatatgtca ataacaaatt ttaaacatc atccaagttt cctattttat gcttttaaga 240  
127 tattatttat ttattttat tttttgtaa aattttaaat tttacataaa tactttctaa 300  
129 ctatgaatata aatataat acaaaagatt ttgaaactaa gaggaaaagt aattataatc 360  
131 attttaatca ttaaaattata tactcaaattt gatacaattt gatatttacag tcacacacat 420  
133 taggtacaga gatcaaattt tgaatttagga gttgagaaat gctttcgagt aaaatctgca 480  
135 ataagatgac tatattccta aggtgttat gtcagtctata aataaaaatc actatatttt 540  
137 caatttgtgt atggtgatct tctaaaggat aaatgtgtga agtggaaatac cttgcattat 600  
139 caac atg aaa cga cgt tgg tct aac aac ggt ggc ttc caa acc ttg cgg 649  
140 Met Lys Arg Arg Trp Ser Asn Asn Gly Gly Phe Gln Thr Leu Arg  
141 1 5 10 15  
143 atg ctc gaa gat gtt gca tct ggt gag gta acg tcg tct tct ggt ggc 697  
144 Met Leu Glu Asp Val Ala Ser Gly Glu Val Thr Ser Ser Gly Gly  
145 20 25 30  
147 gcc ctg gct gcg ttg agt ccg gct tcg tta ggt tcg ccc gag aca tat 745  
148 Ala Leu Ala Ala Leu Ser Pro Ala Ser Leu Gly Ser Pro Glu Thr Tyr  
149 35 40 45  
151 gcc gag ctg gat ttg tgg gtg tac gag gaa gct ggc tta cat cca ggt 793  
152 Ala Glu Leu Asp Leu Trp Val Tyr Glu Glu Ala Gly Leu His Pro Gly  
153 50 55 60

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/10/065,200

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Input Set : N:\Crf3\Datashold\EFS\10065200\FC-4-1.txt  
Output Set: N:\CRF4\09262002\J065200.raw

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156	Ser	Gly	Val	Gln	Gly	Cys	Gly	Ala	Val	Ala	Ala	Leu	Pro	Ser	Ile	Ala		
157	65					70					75							
159	aca	cag	gtc	ccc	cta	gga	ttg	ccc	gct	atg	gac	cta	ccg	cac	acg	cct	889	
160	Thr	Gln	Val	Pro	Leu	Gly	Leu	Pro	Ala	Met	Asp	Leu	Pro	His	Thr	Pro		
161	80					85					90					95		
163	cgg	agt	gac	agt	gcf	ggt	agc	atc	tca	tca	gga	cga	gaa	gac	ctg	tca	937	
164	Arg	Ser	Asp	Ser	Ala	Gly	Ser	Ile	Ser	Ser	Gly	Arg	Glu	Asp	Leu	Ser		
165						100					105					110		
167	ccg	cct	agt	tct	ttg	aac	ggc	tat	tca	gca	gat	ggc	tgc	gaa	gcf	aag	985	
168	Pro	Pro	Ser	Ser	Leu	Asn	Gly	Tyr	Ser	Ala	Asp	Gly	Cys	Glu	Ala	Lys		
169						115					120					125		
171	aag	gcc	aag	aaa	ggg	ccg	gcf	ccg	ccg	cag	cag	gag	gaa	cta	tgt	ctt	1033	
172	Lys	Ala	Lys	Lys	Gly	Pro	Ala	Pro	Arg	Gln	Gln	Glu	Glu	Leu	Cys	Leu		
173						130					135					140		
175	gtg	tgc	ggc	gac	cgt	gcc	tcc	ggg	tat	cat	tac	aac	gct	ctt	act	tgt	1081	
176	Val	Cys	Gly	Asp	Arg	Ala	Ser	Gly	Tyr	His	Tyr	Asn	Ala	Leu	Thr	Cys		
177						145					150					155		
179	gaa	gga	tgc	aaa	ggt	ttt	ttc	cga	cga	agt	gtg	act	aag	aat	gcc	gtg	1129	
180	Glu	Gly	Cys	Lys	Gly	Phe	Phe	Arg	Arg	Ser	Val	Thr	Lys	Asn	Ala	Val		
181	160					165					170					175		
183	tac	gtg	tgc	aag	ttt	ggg	cac	acg	tgc	gaa	atg	gac	atg	tat	atg	cga	1177	
184	Tyr	Val	Cys	Lys	Phe	Gly	His	Thr	Cys	Glu	Met	Asp	Met	Tyr	Met	Arg		
185						180					185					190		
187	cgc	aaa	tgt	cag	gaa	tgt	agg	ctc	aag	aaa	tgt	ttg	gct	gtc	gga	atg	1225	
188	Arg	Lys	Cys	Gln	Glu	Cys	Arg	Leu	Lys	Lys	Cys	Leu	Ala	Val	Gly	Met		
189						195					200					205		
191	cgc	ccc	gag	tgc	gtg	gtt	ccc	gaa	aac	caa	tgc	gcc	atg	aag	cga	aag	1273	
192	Arg	Pro	Glu	Cys	Val	Val	Pro	Glu	Asn	Gln	Cys	Ala	Met	Lys	Arg	Lys		
193						210					215					220		
195	gaa	aag	aag	gca	cag	aag	gaa	aag	gac	atc	gga	cca	ata	tca	ggt	acc	1321	
196	Glu	Lys	Lys	Ala	Gln	Lys	Glu	Lys	Asp	Ile	Gly	Pro	Ile	Ser	Gly	Thr		
197						225					230					235		
199	gtt	gga	aaa	tct	gtc	ccc	tta	gct	aat	tct	gca	tta	ctt	cag	aag	1369		
200	Val	Gly	Lys	Ser	Ala	Ala	Pro	Leu	Ala	Asn	Ser	Ala	Leu	Leu	Gln	Lys		
201	240					245					250					255		
203	cct	gat	att	ttg	cct	gcf	gtc	atg	aaa	tgc	gac	cca	tta	cct	cca	gaa	1417	
204	Pro	Asp	Ile	Leu	Pro	Ala	Val	Met	Lys	Cys	Asp	Pro	Leu	Pro	Pro	Glu		
205						260					265					270		
207	gca	act	aaa	gtg	aaa	ttt	ttg	tca	gac	aag	att	ctt	gct	gaa	aac	aga	1465	
208	Ala	Thr	Lys	Val	Lys	Phe	Leu	Ser	Asp	Lys	Ile	Leu	Ala	Glu	Asn	Arg		
209						275					280					285		
211	att	cga	aat	gtt	cca	cct	ttg	act	gca	aat	caa	gaa	tat	gtg	atc	gca	1513	
212	Ile	Arg	Asn	Val	Pro	Pro	Leu	Thr	Ala	Asn	Gln	Glu	Tyr	Val	Ile	Ala		
213						290					295					300		
215	aga	tta	gtg	tgg	tac	caa	gat	gga	tat	gaa	caa	cct	tct	gag	gaa	gac	1561	
216	Arg	Leu	Val	Trp	Tyr	Gln	Asp	Gly	Tyr	Gl	u	Gln	Pro	Ser	Glu	Glu	Asp	
217						305					310					315		
219	cta	cga	agg	ata	atg	ata	agt	aca	cca	gct	gaa	gat	gaa	gct	ctt	gaa	1609	

RAW SEQUENCE LISTING  
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Input Set : N:\Crf3\Datohold\EFS\10065200\FC-4-1.txt  
Output Set: N:\CRF4\09262002\J065200.raw

220 Leu Arg Arg Ile Met Ile Ser Thr Pro Ala Glu Asp Glu Ala Leu Glu  
221 320 325 330 335  
223 ttt cggtt cat ata act gaa att acc ata ctt act gtg cag ctt ata gtg 1657  
224 Phe Arg His Ile Thr Glu Ile Thr Ile Leu Thr Val Gln Leu Ile Val  
225 340 345 350  
227 gaa ttt gca aag ggt tta cca gct ttt acc aaa ata cca caa gaa gat 1705  
228 Glu Phe Ala Lys Gly Leu Pro Ala Phe Thr Lys Ile Pro Gln Glu Asp  
229 355 360 365  
231 caa ata aca tta tta aag gca ttt tca agt gaa gta atg atg ctg cga 1753  
232 Gln Ile Thr Leu Leu Lys Ala Cys Ser Ser Glu Val Met Met Leu Arg  
233 370 375 380  
235 atg gct cggtt cgg tac gat gca gtg tcg gat tca atc tta ttc gcg aat 1801  
236 Met Ala Arg Arg Tyr Asp Ala Val Ser Asp Ser Ile Leu Phe Ala Asn  
237 385 390 395  
239 aat cgt tca tat act cgt gac tcc tat aaa atg gct ggt atg gca gat 1849  
240 Asn Arg Ser Tyr Thr Arg Asp Ser Tyr Lys Met Ala Gly Met Ala Asp  
241 400 405 410 415  
243 aca ata gaa gat cta ttg cat ttt ttt cga cag atg tat act atg act 1897  
244 Thr Ile Glu Asp Leu Leu His Phe Cys Arg Gln Met Tyr Thr Met Thr  
245 420 425 430  
247 gta gac aat gtg gag tat gca cta ata aca gca att gtg att ttt tca 1945  
248 Val Asp Asn Val Glu Tyr Ala Leu Ile Thr Ala Ile Val Ile Phe Ser  
249 435 440 445  
251 gat cga cct gga ttg gaa caa gca gat ctt gtg gaa caa att caa agt 1993  
252 Asp Arg Pro Gly Leu Glu Gln Ala Asp Leu Val Glu Gln Ile Gln Ser  
253 450 455 460  
255 tat tac atc aaa aca tta aag tgc tac att ttg aat cga cat agt ggt 2041  
256 Tyr Tyr Ile Lys Thr Leu Lys Cys Tyr Ile Leu Asn Arg His Ser Gly  
257 465 470 475  
259 gac cct aag ttt gga ata ttg ttt gcc aaa ctt ctt tct att ctt act 2089  
260 Asp Pro Lys Cys Gly Ile Leu Phe Ala Lys Leu Leu Ser Ile Leu Thr  
261 480 485 490 495  
263 gaa tta cgc acg tta gga aat caa aac tca gaa atg ttt gca ctg 2137  
264 Glu Leu Arg Thr Leu Gly Asn Gln Asn Ser Glu Met Cys Phe Ala Leu  
265 500 505 510  
267 aaa ttg aag aac aga aaa ctt cct aga ttt tta gaa gaa att tgg gat 2185  
268 Lys Leu Lys Asn Arg Lys Leu Pro Arg Phe Leu Glu Glu Ile Trp Asp  
269 515 520 525  
271 gtg aca gat aat gtg cct cct acg ata gac agc atg cat agt gta tcg 2233  
272 Val Thr Asp Asn Val Pro Pro Thr Ile Asp Ser Met His Ser Val Ser  
273 530 535 540  
275 gag aat ttc tat aat aat gaa agt aat ggt acc agt gat tct aca cca 2281  
276 Glu Asn Phe Tyr Asn Asn Glu Ser Asn Gly Thr Ser Asp Ser Thr Pro  
277 545 550 555  
279 atg taa agtgctcaga aaatcaacag ctctttgca tatttgttta ctgtgtactg 2337  
280 Met  
281 560  
283 gtatggaaaa ttaaggtaac attaaaatat tacataagca ccatggaaa aggcgcgtt 2397  
285 ggcaatattt ttgaataat aatctattga gacggtacca atggtaaact tggaaaaat 2457

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Input Set : N:\Crf3\Datohold\EFS\10065200\FC-4-1.txt  
Output Set: N:\CRF4\09262002\J065200.raw

287 tcttctgttt acatattagg agccaagtta aagaataagt atgaatgatt gttgataat 2517  
289 tgcttgtgt acaactcaat ggccttcaat aaaataatgt ttaacaacgt cgataggaaa 2577  
291 ttaaaaagaa atcatgtgt aataaaatcat ttgttaggccc gccatactga tttacctata 2637  
293 ttaagcagaa acttcttaat gtataaaatat attttgctt tgcaaggtaa aaccttctca 2697  
295 atgcaacaat gaattatata tataaacatt gattatTTTA tcgttagaat ttgaattttg 2757  
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299 aaaaaa 2822  
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304 <212> TYPE: PRT  
305 <213> ORGANISM: Ctenocephalides felis  
307 <400> SEQUENCE: 6  
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312 20 25 30  
314 Leu Ala Ala Leu Ser Pro Ala Ser Leu Gly Ser Pro Glu Thr Tyr Ala  
315 35 40 45  
317 Glu Leu Asp Leu Trp Val Tyr Glu Glu Ala Gly Leu His Pro Gly Ser  
318 50 55 60  
320 Gly Val Gln Gly Cys Gly Ala Val Ala Ala Leu Pro Ser Ile Ala Thr  
321 65 70 75 80  
323 Gln Val Pro Leu Gly Leu Pro Ala Met Asp Leu Pro His Thr Pro Arg  
324 85 90 95  
326 Ser Asp Ser Ala Gly Ser Ile Ser Ser Gly Arg Glu Asp Leu Ser Pro  
327 100 105 110  
329 Pro Ser Ser Leu Asn Gly Tyr Ser Ala Asp Gly Cys Glu Ala Lys Lys  
330 115 120 125  
332 Ala Lys Lys Gly Pro Ala Pro Arg Gln Gln Glu Glu Leu Cys Leu Val  
333 130 135 140  
335 Cys Gly Asp Arg Ala Ser Gly Tyr His Tyr Asn Ala Leu Thr Cys Glu  
336 145 150 155 160  
338 Gly Cys Lys Gly Phe Phe Arg Arg Ser Val Thr Lys Asn Ala Val Tyr  
339 165 170 175  
341 Val Cys Lys Phe Gly His Thr Cys Glu Met Asp Met Tyr Met Arg Arg  
342 180 185 190  
344 Lys Cys Gln Glu Cys Arg Leu Lys Lys Cys Leu Ala Val Gly Met Arg  
345 195 200 205  
347 Pro Glu Cys Val Val Pro Glu Asn Gln Cys Ala Met Lys Arg Lys Glu  
348 210 215 220  
350 Lys Lys Ala Gln Lys Glu Lys Asp Ile Gly Pro Ile Ser Gly Thr Val  
351 225 230 235 240  
353 Gly Lys Ser Ala Ala Pro Leu Ala Asn Ser Ala Leu Leu Gln Lys Pro  
354 245 250 255  
356 Asp Ile Leu Pro Ala Val Met Lys Cys Asp Pro Leu Pro Pro Glu Ala  
357 260 265 270  
359 Thr Lys Val Lys Phe Leu Ser Asp Lys Ile Leu Ala Glu Asn Arg Ile  
360 275 280 285  
362 Arg Asn Val Pro Pro Leu Thr Ala Asn Gln Glu Tyr Val Ile Ala Arg

RAW SEQUENCE LISTING ERROR SUMMARY                   DATE: 09/26/2002  
PATENT APPLICATION: US/10/065,200                   TIME: 07:37:30

Input Set : N:\Crf3\Datahold\EFS\10065200\FC-4-1.txt  
Output Set: N:\CRF4\09262002\J065200.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:45; N Pos. 15

Seq#:51; N Pos. 10

VARIABLE LOCATION SUMMARY DATE: 09/26/2002  
PATENT APPLICATION: US/10/065,200 TIME: 07:37:30

Input Set : N:\Crf3\Datahold\EFS\10065200\FC-4-1.txt  
Output Set: N:\CRF4\09262002\J065200.raw

Use of n's or Xaa's(NEW RULES):

Use of n's and/or Xaa's have been detected in the Sequence Listing.

Use of <220> to <223> is MANDATORY if n's or Xaa's are present.

in <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.

Seq#:45; N Pos. 15

Seq#:51; N Pos. 10

VERIFICATION SUMMARY DATE: 09/26/2002  
PATENT APPLICATION: US/10/065,200 TIME: 07:37:30

Input Set : N:\Crf3\Datashold\EFS\10065200\FC-4-1.txt  
Output Set: N:\CRF4\09262002\J065200.raw

L:12 M:270 C: Current Application Number differs, Replaced Current Application Number  
L:2775 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:32  
L:3458 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:45  
L:3458 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:45  
L:3458 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:45 after pos.:0  
L:3536 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:51  
L:3536 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:51  
L:3536 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:51 after pos.:0